

REPLY UNDER 37 C.F.R § 1.116 – EXPEDITED PROCEDURE – GROUP ART UNIT 2171

Appl. No. 09/661,674
Amtd. Dated May 25, 2004
Reply to Office Action of March 30, 2004

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the above-identified application:

Claim 1 (currently amended): A method for displaying navigational data associated with an aircraft on a display having a display coordinate system, said method comprising the steps of:

providing one or more databases, each database including navigational data stored as geospatially organized data structures that include data representative of latitude and longitude coordinates;

retrieving data from one or more of said databases;

dynamically tiling the retrieved data onto one or more other data structures that represent display elements projected into the display coordinate system;

projecting and culling the retrieved dynamically tiled data to a current display range, to thereby generate display data structures;

updating, in real-time, a projected display database that includes the generated display data structures and that substantially maintains correct projections of the projected dynamically tiled and culled data from latitude and longitude coordinates to Cartesian coordinates;

modifying said display database in accordance with avionics data associated with said aircraft; and

displaying said display database in accordance with said modifying step.

Claim 2 (currently amended): A display system comprising:

a cursor control device (CCD) configured to accept input from a user;

a display computer coupled to said CCD and configured to process avionics data and said input from said user, wherein said display computer is further coupled to a display having a display coordinate system and at least one database including navigational data stored as

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geospatially organized data structures that include data representative of latitude and longitude coordinates;

said display computer further configured to:

dynamically tile data retrieved from the at least one database onto one or more other data structures that represent display elements projected into the display coordinate system;

project and cull geospatially organized data structures retrieved from each database the dynamically tiled data to a current display range, to thereby generate display data structures;

update, in real-time, a projected display database that includes the generated display data structures and that substantially maintains correct projections of the projected dynamically tiled and culled data from latitude and longitude coordinates to Cartesian coordinates;

modify said display database in accordance with avionics data associated with an aircraft; and

display said display database in accordance with said modifying step.

Claim 3 (previously presented): The method of claim 1, further comprising the step of unifying map and plan mode presentations into a virtual map.

Claim 4 (previously presented): The method of claim 1, further comprising the step of simultaneously displaying at least two profiles.

Claim 5 (previously presented): The method of claim 1, further comprising the step of displaying a map from a variable perspective, wherein the angle of incidence between the pilot's view and earth's surface is set at an angle of less than ninety degrees.

Claim 6 (previously presented): The system of claim 2 wherein the display computer is configured to display a map from a variable perspective.

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Claim 7 (previously presented): The system of claim 2, further comprising a map of layered information, wherein said layers are controllable via graphical interfaces.

Claim 8 (previously presented): The system of claim 2, wherein said CCD is a graphical user interface.

Claim 9 (previously presented): The system of claim 2, wherein said display is configured to display flight plan transitions as curved paths from one flight leg to the next.

Claim 10 (canceled).